GARY W. FRAHM

6481 Bixby Hill Road Long Beach, CA 90815

Phone: (562) 307-0816 - Email: glgary@aol.com

QUESTIONS FOR THE LONG BEACH AIRPORT TERMINAL EIR

- 1. Was the annual noise budget exceeded by commercial fights in 2002 and 2003?
- 2. By how much was the annual noise budget was exceeded?
- 3. How is the noise budget calculated?

n 5 .

- 4. Is a computer program is used to determine the annual noise budget? If so, what it the name and version of this program?
- 5. When the 1989-1990-baseline noise budget was first established, how were the measurements performed?
- 6. Who or what company performed the 1989-1990-baseline budget?
- 7. What noise monitoring sites were included in the 1989-1990-baseline budget?
- 8. If the annual noise budget was exceeded in the prior years, does this information carry over into the next year in anyway?
- 9. What is the exact wording of the Development and Use Standard for the Long Beach Airport Terminal Planned Development Plan Ordinance?
- 10. Why hasn't the Airport Manager developed a land use compatibility program addressed existing and future aviation noise levels before certification of this EIR?
- 11. Why is the land use compatibility program voluntary?
- 12. Why is the noise attenuation only available to residential units with the 65 CNEL contour?
- 13. What improvements are included in the sound insulation treatment of the owners of affected property?
- 14. What language would be included in the noise easement over said property?
- 15. What are the possible funding sources for the noise attenuation?
- 16. What is the total amount of funds that would be available to a resident for noise attenuation?
- 17. What are the possible methods for establishing priorities for implementing improvements to property affected by airport noise?
- 18. What language would be contained in the installation agreement?
- 19. What qualifies the City of Long Beach, Airport Bureau to administer the land use compatibility program?
- 20. Where would one find/or who has the voluntary noise attenuation program recommended in the DEIR?
- 21. What is the difference in noise levels between a fully loaded commercial airplane and a fifty percent loaded commercial airplane?

- 22. Some of the monthly noise statistics provided by the City of Long Beach cite complaints in Sunset Beach. How are these noise complaints being addressed? Are there any plans to install monitoring equipment in those areas?
- 23. Some of the monthly noise statistics provided by the City of Long Beach cite complaints in Huntington Beach. How are these noise complaints being addressed? Are there any plans to install monitoring equipment in those areas?
- 24. Why is Bixby Hill not included in the noise monitoring system?
- 25. In 2004 carriers flew at an average of 72% of passenger capacity, for the first 10 months in 2005 they flew at 80%. The city sound consultants say, "the more load the higher the noise level". How does this factor into the City of Long Beach DEIR?
- 26. In Appendix F, Technical Report, Noise Analysis, dated October 2005, page F-2, in the paragraph entitled Propagation of Noise, it states, "the degree of absorption varies depending on the frequency of the sound as well as the humidity and temperature of the air". Are these measurements being recorded at the various monitoring sites and factored into the noise monitoring program?
- 27. In Appendix F, Technical Report, Noise Analysis, dated October 2005, page F-2, in the paragraph entitled Propagation of Noise, it states, "turbulence and gradients of wind, temperature and humidity play a significant role in determining the propagation of sound over a large distance". Are these measurements being recorded at the various monitoring sites and factored into the noise monitoring program?
- 28. "Over large distances, the lower frequencies become the dominant sound as higher frequencies are attenuated". Do the monitoring stations have the ability to measure these frequencies?
- 29. In Exhibit 1-2, the Effect of Weather on Sound Propagation shows the effect water plays in sound propagation. Bixby Hill is surrounded on two sides by water or concrete. Is this a fair representation of the effects of sound on Bixby Hill, considering the sound source is located on the ground?
- 30. Exhibit 1-4, Typical Outdoor Noise Levels in Terms of CNEL shows a noise level of 92 CNEL for Touchdown at Major Airport at a distance of ¾ of a mile. Why are the measurements of the City of Long Beach so much lower?
- 31. "Extensive research has been conducted on the effect of noise on sleep disturbance. Recommended values for desired sound levels in residential bedroom space range from 25 to 45 dBA with 35 to 40 dBA being the norm". Has the City of Long Beach ever conducted any research on the effect of noise on sleep disturbances local residents' experience?
- 32. Has the City of Long Beach ever surveyed the residents and business owners regarding the annoyance levels caused by Long Beach Airport noise?
- 33. The Airport and Airway Improvement Act of 1982, as amended (Public Laws 91-258 and 94-353, establishes the Federal requirement for funding of airport planning. Has the City of Long Beach adopted any zoning laws restricting the use of any land in the City of Long Beach under this Act?
- 34. Has the City of Long Beach developed an airport noise abatement plan?

- 35. Exhibit 1-9 shows residential sound levels of 75-80dba and 80-85dba as not being acceptable. Why is the City of Long Beach sound monitoring system not including Bixby Hill which has levels of 74-85dba?
- 36. Are the sound levels of between 74-85dba found in Bixby Hill compatible with Part 150?
- 37. Do sound levels of 74-85dba require additional restrictions?
- 38. Are sound levels of 74-85dba acceptable to Caltrans?
- 39. Why are single-family residences exempt from California Noise Insulation Standards?
- 40. Why has the Long Beach General Plan Noise Element not been updated since 1974?
- 41. Why does the City of Long Beach not have a specific city wide noise standard?
- 42. What categories of airport users has the Airport Manager adjusted permissible single event noise limitations on in the last five years? Why were the limitations adjusted?
- 43. How long are noise levels at the airport stored in the "state of the art noise monitoring system"?
- 44. Why are the SENEL limits in the Long Beach Noise Ordinance so high?
- 45. When was Monitoring Site 1 installed?
- 46. Who is the manufacturer of Monitoring Site 1?
- 47. What type of equipment does Monitoring Site 1 contain? What are the components and serial numbers?
- 48. How often is Monitoring Site 1 calibrated? What were the dates in the last three years?
- 49. Does Monitoring Site 1 have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 50. How was Monitoring Site 1 installation site selected?
- 51. When was Monitoring Site 2 installed?
- 52. Monitoring Site 2, who is the manufacturer?
- 53. Monitoring Site 2, what type of equipment does it contain? Please list components and serial numbers.
- 54. Monitoring Site 2, how often is it calibrated? Please list dates over the last three years.
- 55. Monitoring Site 2, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 56. Monitoring Site 2, how was the installation site selected?
- 57. Monitoring Site 3, when was it installed?
- 58. Monitoring Site 3, who is the manufacturer?
- 59. Monitoring Site 3, what type of equipment does it contain? Please list components and serial numbers.
- 60. Monitoring Site 3, how often is it calibrated? Please list dates over the last three years.
- 61. Monitoring Site 3, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 62. Monitoring Site 3, how was the installation site selected?
- 63. Monitoring Site 4, when was it installed?

- 64. Monitoring Site 4, who is the manufacturer?
- 65. Monitoring Site 4, what type of equipment does it contain? Please list components and serial numbers.
- 66. Monitoring Site 4, how often is it calibrated? Please list dates over the last three years.
- 67. Monitoring Site 4, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 68. Monitoring Site 4, how was the installation site selected?
- 69. Monitoring Site 5 when was it installed?
- 70. Monitoring Site 5, who is the manufacturer?
- 71. Monitoring Site 5, what type of equipment does it contain? Please list components and serial numbers.
- 72. Monitoring Site 5, how often is it calibrated? Please list dates over the last three years.
- 73. Monitoring Site 5, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 74. Monitoring Site 5, how was the installation site selected?
- 75. Monitoring Site 6 when was it installed?
- 76. Monitoring Site 6, who is the manufacturer?
- 77. Monitoring Site 6, what type of equipment does it contain? Please list components and serial numbers.
- 78. Monitoring Site 6, how often is it calibrated? Please list dates over the last three years.
- 79. Monitoring Site 6, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 80. Monitoring Site 6, how was the installation site selected?
- 81. Monitoring Site 7, when was it installed?
- 82. Monitoring Site 7, who is the manufacturer?
- 83. Monitoring Site 7, what type of equipment does it contain? Please list components and serial numbers.
- 84. Monitoring Site 7, how often is it calibrated? Please list dates over the last three years.
- 85. Monitoring Site 7, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 86. Monitoring Site 7, how was the installation site selected?
- 87. Monitoring Site 8, when was it installed?
- 88. Monitoring Site 8, who is the manufacturer?
- 89. Monitoring Site 8, what type of equipment does it contain? Please list components and serial numbers.
- 90. Monitoring Site 8, how often is it calibrated? Please list dates over the last three years.
- 91. Monitoring Site 8, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 92. Monitoring Site 8, how was the installation site selected?
- 93. Monitoring Site 9, when was it installed?
- 94. Monitoring Site 9, who is the manufacturer?

- 95. Monitoring Site 9, what type of equipment does it contain? Please list components and serial numbers.
- 96. Monitoring Site 9, how often is it calibrated? Please list dates over the last three years.
- 97. Monitoring Site 9, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 98. Monitoring Site 9, how was the installation site selected?
- 99. Monitoring Site 10, when was it installed?
- 100. Monitoring Site 10, who is the manufacturer?
- 101. Monitoring Site 10, what type of equipment does it contain? Please list components and serial numbers.
- 102. Monitoring Site 10, how often is it calibrated? Please list dates over the last three years.
- 103. Monitoring Site 10, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 104. Monitoring Site 10, how was the installation site selected?
- 105. Monitoring Site 11, when was it installed?
- 106. Monitoring Site 11, who is the manufacturer?
- 107. Monitoring Site 11, what type of equipment does it contain? Please list components and serial numbers.
- 108. Monitoring Site 11, how often is it calibrated? Please list dates over the last three years.
- 109. Monitoring Site 11, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 110. Monitoring Site 11, how was the installation site selected?
- 111. Monitoring Site 12, when was it installed?
- 112. Monitoring Site 12, who is the manufacturer?
- 113. Monitoring Site 12, what type of equipment does it contain? Please list components and serial numbers.
- 114. Monitoring Site 12, how often is it calibrated? Please list dates over the last three years.
- 115. Monitoring Site 12, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 116. Monitoring Site 12, how was the installation site selected?
- 117. Monitoring Site 12, how was the installation site selected?
- 118. Monitoring Site 13, when was it installed?
- 119. Monitoring Site 13, who is the manufacturer?
- 120. Monitoring Site 13, what type of equipment does it contain? Please list components and serial numbers.
- 121. Monitoring Site 13, how often is it calibrated? Please list dates over the last three years.
- 122. Monitoring Site 13, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 123. Monitoring Site 13, how was the installation site selected?
- 124. Monitoring Site 14, when was it installed?
- 125. Monitoring Site 14, who is the manufacturer?

- 126. Monitoring Site 14, what type of equipment does it contain? Please list components and serial numbers.
- 127. Monitoring Site 14, how often is it calibrated? Please list dates over the last three years.
- 128. Monitoring Site 14, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 129. Monitoring Site 14, how was the installation site selected?
- 130. Monitoring Site 15, when was it installed?
- 131. Monitoring Site 15, who is the manufacturer?
- 132. Monitoring Site 15, what type of equipment does it contain? Please list components and serial numbers.
- 133. Monitoring Site 15, how often is it calibrated? Please list dates over the last three years.
- 134. Monitoring Site 15, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 135. Monitoring Site 15, how was the installation site selected?
- 136. Monitoring Site 16, when was it installed?
- 137. Monitoring Site 16, who is the manufacturer?
- 138. Monitoring Site 16, what type of equipment does it contain? Please list components and serial numbers.
- 139. Monitoring Site 16, how often is it calibrated? Please list dates over the last three years.
- 140. Monitoring Site 16, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 141. Monitoring Site 16, how was the installation site selected?
- 142. Monitoring Site 17, when was it installed?
- 143. Monitoring Site 17, who is the manufacturer?
- 144. Monitoring Site 17, what type of equipment does it contain? Please list components and serial numbers.
- 145. Monitoring Site 17, how often is it calibrated? Please list dates over the last three years.
- 146. Monitoring Site 17, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 147. Monitoring Site 17, how was the installation site selected?
- 148. Monitoring Site 18, when was it installed?
- 149. Monitoring Site 18, who is the manufacturer?
- 150. Monitoring Site 18, what type of equipment does it contain? Please list components and serial numbers.
- 151. Monitoring Site 18, how often is it calibrated? Please list dates over the last three years.
- 152. Monitoring Site 18, does this site have the ability to monitor temperature, barometric pressure, wind speed and humidity?
- 153. Monitoring Site 18, how was the installation site selected?
- 154. What is the name of the manufacturer and what is the version of the computer program used to accumulate the information of monitoring sites?

- 155. How much historical information is stored on the computer monitoring program?
- 156. What is the noise budget for residences nearest to Station 1, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 157. What is the noise budget for residences nearest to Station 2, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 158. What is the noise budget for residences nearest to Station 3, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 159. What is the noise budget for residences nearest to Station 4, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 160. What is the noise budget for residences nearest to Station 5, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 161. What is the noise budget for residences nearest to Station 6, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 162. What is the noise budget for residences nearest to Station 7, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 163. What is the noise budget for residences nearest to Station 8, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 164. What is the noise budget for residences nearest to Station 9, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 165. What is the noise budget for residences nearest to Station 10, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 166. What is the noise budget for residences nearest to Station 11, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 167. What is the noise budget for residences nearest to Station 12, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 168. What is the noise budget for residences nearest to Station 13, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 169. What is the noise budget for residences nearest to Station 14, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)

- 170. What is the noise budget for residences nearest to Station 15, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 171. What is the noise budget for residences nearest to Station 16, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 172. What is the noise budget for residences nearest to Station 17, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 173. What is the noise budget for residences nearest to Station 18, for air carriers, commuters, industrial, charter and general aviation? (Weighted by time of day and noise level)
- 174. Is there a newer version FAA's Integrated Noise Model (INM) version 6.1?
- 175. Who makes Arcview Geographic Information System?
- 176. Who insures the operational data collected in the Integrated Noise Model (INM) Version 6.1 is correct before it is loaded in Arcview Geographic Information System (GIS) software?
- 177. What optionally data on the Long Beach Airport has been inputted into the INM program?
- 178. Where does data for the meteorological conditions inputted in the INM program originate?
- 179. Who developed the ANOMS system?
- 180. What version of the ANOMS program is used?
- 181. Does the ANOMS program have the ability to monitor wind, humidity or temperature?
- 182. How is noise complaint data analyzed?
- 183. What criteria are used to analyze noise complaints?
- 184. Would the CNEL contours used to depict existing noise exposure at LGB, be higher if data for ANOMS system was wrong?
- 185. Can trees, walls, and foliage around ANOMS sites distort the data collected?
- 186. If SENEL readings of 75 dbA to 84 dbA are being recorded in Bixby Hill, would this change the CNEL contour?
- 187. In Table 3-2, how is the community measured CNEL complied and computed?
- 188. In Table 3-2, how is the aircraft measured CNEL complied and computed?
- 189. In Table 3-2, how is the total complied?
- 190. "The City Noise Ordinance limits SENEL values to range between 79 and 102.5 dBA depending on runway, operation and time of day". Exhibit 1-1, lists these levels as "High Urban Ambient Sound (80) to a Boeing 747-200 taking off, measured 6,500 meters from beginning of takeoff roll". How far from the Airport do these City Noise Ordinance limitations extend?
- 191. How are the contours in Exhibit 3-4a extended over the ocean beyond Monitoring Site 3? What are the projections based on considering Monitoring Site 3 is the first monitoring site on the arrival approach?
- 192. Why was only calendar year 2004 used to compute Time of Day of Operations?
- 193. How is the night time penalty for the noise budget computation processed?
- 194. What is the "Noise Element of the General Plan"? (Please give details).

- 195. How many times during the last 10 years has the Long Beach Airport been non-compliant with the Noise Ordinance, regulations and Noise Element.
- 196. Did the analysis to determine the realistic number of flights which could be accommodated under the Long Beach Airport Noise Budget, take into consideration the load values of full planes?
- 197. Why would the City of Long Beach assume airlines will reduce night operations by 50% from the 2004 level? How do the City projections for additional flights work and compare with current and past levels (2002, 2003)? Which of the years would be the worst scenario?
- 198. How does the departure of American Airlines affect Fleet Mix assumption?
- 199. Who is MGA who generated CNEL contours for full budget utilization?
- 200. Why did the City of Long Beach only use AAAI, Inc. data files in 2004 for projections at full budget utilization?
- 201. If you use data files for 2000-2003, what would be the full budget utilization contours?
- 202. Who maintains sound monitoring sites 1-18?
- 203. Why was duct tape covering part of Monitoring Site 3 microphone in 2004?
- 204. When was the last date the City of Long Beach submitted an Updated Noise Map to the FAA?
- 205. Has the City of Long Beach applied for any grants to update the sound monitoring system in the last three years?
- 206. Federal Aviation Regulations Part 150 established FAA's Noise Compatibility Program. Under its Noise Compatibility Program, FAA awards Airport Improvement Program grants to airports to acquire land and sound-insulate homes and public buildings in areas already exposed to significant aircraft noise. Is the City of Long Beach planning to acquire any residential or commercial property affected by airport noise?
- 207. Is the City of Long Beach seeking funds to insulate homes?
- 208. What is the maximum amount of funds a homeowner could be granted for insulation?
- 209. The Airport Improvement Program Handbook and Noise Compatibility Program guidance require airports dispose of land acquired with noise grants when the land is no longer needed for noise purposes or airport expansion. Has the City of Long Beach disposed of any land acquired with noise grant money?
- 210. Approach noise has recently become a more prominent issue. Greater noise emissions from fans and compressors in high-bypass engines have increased the comparative importance —and sometimes the actual noise levels—of aircraft approaches. Has the City of Long Beach take into consideration these factors?
- 211. Were the noise contours developed in the EIR from project noise contours from type of aircraft or from actual contours developed from the noise monitoring system?
- 212. What is the actual altitude of commercial aircraft approaching the Long Beach Airport over sound monitoring site 3?
- 213. The presence of nearby structures or steep terrain can cause sound wave reflections which may locally increase noise levels. Water or hard ground

surfaces can particularly contribute to such occurrences. Certain meteorological conditions—such as a temperature inversion layer—also can reflect sound back to the ground, resulting in higher noise levels. Rising or falling terrain changes the distance between an aircraft and people on the ground relative to the flat ground assumed in standard INM calculations. These changes in turn increase or reduce the actual sound levels experienced on the ground compared to the levels calculated by the noise model. The FAA's Integrated Noise Model version 6.0 allows assessment of the effects of elevation variations. Has the City of Long Beach used these factors in their noise models?

- 214. Does the City of Long Beach use the Helicopter Noise Model (HNM) for calculation of noise contours?
- 215. In order to calculate noise contours or other noise impact information, INM and the other noise models require several types of data. Some of the data is built into the model database, although (except for HNM) it can be modified by the user. Other data must be entered for each individual noise study. Still other types of data can be entered to refine the analyses, but are not required. Has the City of Long Beach modified the INM model database in any way?
- 216. Does the City of Long Beach airport monitor noise levels with FAA radar data?
- 217. Does the airport noise monitoring system correlate noise events to specific flights?
- 218. INM allows census data to be entered into the program to facilitate evaluation of the numbers of people impacted by various noise levels or aircraft operational scenarios. Does the City of Long Beach use this opinion in its contours?
- 219. Because of the many variables and assumptions associated with their computation, cumulative noise contours representing existing airport activity are often considered to have a precision of approximately ±3 dB. Precision is greatest close to the runway and decreases beyond where flight tracks diverge. Is this why the sound monitoring system for arrivals has not been extended beyond sound monitoring site 3?